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**PATENT**  
**Attorney Docket No. 4173-0348**

**NOTICE OF APPEAL TO THE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

1120

In re Application of: )

Hideaki FUKUZAWA et al. )

Serial No.: 08/940,020 )

Group Art Unit: 2754

Filed: September 29, 1997 )

Examiner: D. Davis

For: MAGNETORESISTANCE EFFECT )  
DEVICE HAVING HARD )  
MAGNETIC FILM STRUCTURAL )  
BODY (as amended) )

**RECEIVED**  
DEC 05 2000  
Technology Center 2600

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**REPLY BRIEF UNDER 35 U.S.C. § 1.193**

In support of the timely filed Notice of Appeal filed June 6, 2000, a timely filed Appeal Brief filed September 22, 2000, and pursuant to 37 C.F.R. § 1.193, Appellants present in triplicate their Reply Brief. This is a response to an October 2, 2000, Examiner's Answer upholding the rejection of claims 21-23, 26, 47, 48, 60-65, 67-75, 77, and 78. If any fees are required, please charge the deficiencies to our Deposit Account No. 06-0916. If a fee is required for an extension of time under 37 C.F.R. § 1.136 and such fee is not accounted for, Appellants petition for such an extension and request that the fee be charged to the Deposit Account No. 06-0916.

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### Issues

The issues presented in this Reply Brief are:

A. Whether the Examiner has improperly rejected claims 60, 67, and 77 under 35 U.S.C. § 112, first paragraph, as lacking enablement.

B. Whether the Examiner has improperly rejected claims 21-23, 26, 47, 48, 60-65, 67-75, 77, and 78 under 35 U.S.C. § 103(a) as being unpatentable over Krounbi in view of Chen.

### Response to Examiner's Answer

#### **A. Claims 60, 67, and 77 Have Been Improperly Rejected Under 35 U.S.C. § 112, First Paragraph.**

Regarding the Section 112 rejection of claims 60, 67, and 77 as lacking enablement, Appellants reiterate that this rejection is without any legal or technical merit. At page 7 of the Office Action the Examiner correctly recites § 112 as requiring that the specification describe the claimed subject matter in such a way that a skilled artisan is able to make and/or use the claimed invention. A person having ordinary skill in the art, in view of Appellants' specification, would be able to make an amorphous layer of 50 nm or less.

In response to Appellants' citation to many patents that use the language less than in the claims, the Examiner argued "the 285,518 patents are not on appeal as is the instant application and the claims and specifications of those patents is [sic] moot with respect to the instant application." Appellants cited those patents as evidence of

long standing Patent Office practice and policy not to reject claims based on precisely the same argument presented by the Examiner. The cited patents are entirely relevant to show that the strained construction of the pending claims adopted by the Examiner conflict with the reasonable and ordinary construction generally given such claim terms.

Further, the full argument provided by Appellants shows that the Patent Office has routinely issued patents including claims to open ended ranges, *i.e.*, where only one end point of a claimed range is expressly recited. For any range having only one endpoint, such a range would generally be undefined either at zero or at infinity. As previously argued, a person having ordinary skill in the art would have absolutely no problem understanding the meets and bounds of the pending claims. Appellants, therefore, respectfully request that the pending rejection be withdrawn.

**B. Claims 21-23, 26, 47, 48, 60-65, 67-75, 77, and 78 have been Improperly Rejected Under 35 U.S.C. § 103(a) as being Unpatentable over Krounbi in View of Chen.**

Regarding the rejection of 21-23, 26, 47, 48, 60-65, 67-75, 77, and 78, Appellants reiterate that the rejection is improper. In their Appeal Brief Appellants argued that the Examiner had provided no valid motivation for combining the element of the magnetic recording medium of Chen with the magnetic recording head of Krounbi. In response, the Examiner asserts at page 10 of the Examiner's Answer "this link is evidenced by appellant's instant application." This assertion by the Examiner is a clear and impermissible use of hindsight. The Examiner cannot cite Appellants' own specification as a motivation to combine against Appellants' claimed invention.

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Of course a specific combination of elements may appear to be obvious after review of the very invention being claimed, the very nature of this sort of "obviousness" is the reason an Examiner may not cite Appellants' own invention against them. The question is whether a person having ordinary skill in the art at the time of the invention would have been motivated to combine the recited elements as claimed by Appellants, and not whether Appellants were so motivated.

The Examiner further states that the "link is also evidence [sic] by the reference to Chen, which states in column 3, lines 37-50 that 'noise attributed to the formation of a magnetic alloy layer exhibiting a bicrystal cluster' is 'dramatically reduced.'" As pointed out previously, the entire passage teaches "dramatically reduced **medium noise**." (emphasis added). The Examiner's insistence upon removing the word medium from the sentence in order to leave the word noise by itself is disingenuous.

The cited reference teaches the reduction of medium noise and not any other kind of noise. As pointed out many times previously, the world is full of many types of noise. During the protracted prosecution of this application the Examiner has failed to provide any evidence of a link between the medium noise cited by Chen and the noise in a magnetic recording head. The question is whether the Examiner can provide any teaching or suggestion from the prior art to support a finding that a person having ordinary skill in the art would have understood a link between the two disparate noise problems such that a solution to one could possibly be applied to the other. No such evidence has been produced, and so the rejection must fail.

Finally, the Examiner cites the Magnetic Recording Handbook as demonstrating "the purview of *one of ordinary skill in the art*." The Examiner asserts that the reference

teaches on page 360 in section 520, that "[t]here are three principle contributors to the noise power of a recording channel: The electronic noise, the reproduce-head noise, and the recording medium noise." Appellants have not contested that different types of noise exist. In fact, that is entirely the point. Appellants have expressly recited the use of a material having a bi-crystal structure. The Examiner cites a reference that teaches the use of a material having a bi-crystal structure in order to reduce medium noise. Nothing stated in any of the references cited by the Examiner remotely teaches or suggests the use of the recited material in a magnetic recording head. The Magnetic Recording Handbook, as cited by the Examiner, does not state that materials that reduce one type of noise may be used to reduce another type of noise. The fact that the two types of noise are mentioned in the same sentence does not remotely teach or suggest the adaptation of a solution to one problem to solve one of the others.

Once again, Appellants assert that ***the Examiner has failed to provide any motivation to combine the teachings of Chen with the teachings of Krounbi***. The act of picking and choosing disparate elements from the prior art in order to meet the claim limitations is invalid. The only support provided by the Examiner is hindsight in view of Appellants' own specification. Such a use of hindsight is impermissible as a matter of law.

Regarding Appellants argument with respect to claim 22 on page 11 of Appellants' brief, the Examiner asserts at page 11 of the Examiner's Answer that the rejection is:

an obvious rejection . . . that which would have been obvious to a person having ordinary skill in the art at the time the invention was made and what the relevant art suggests. Furthermore, appellants have not taken

the liberty to point out exactly what precludes the Cobalt (Co) referenced in the above rejection from having a Co(110) crystallographic orientation oriented perpendicular to the surface, and it is unclear as to whether appellant is suggesting that the material Co(110) is a newly discovered material.

As Appellants pointed out previously, the prior art cited by the Examiner fails to teach or suggest the use of a material having the recited properties. Because the cited prior art fails to teach a material having the recited properties, the rejection must fail.

The Examiner's assertion that Appellants must "point out exactly what precludes the Cobalt (Co) . . . from having a Co(110) crystallographic orientation oriented perpendicular to the surface" reverses the very nature of patent prosecution. If the Examiner is asserting that the cited material in the prior art "necessarily" has the claimed composition, and therefore, that the properties are inherent to the disclosed material, then Appellants respectfully traverse this conclusion. The Examiner's assertion that the burden is upon Appellants to prove a negative, however, is incorrect as a matter of law. The Examiner has failed to provide any legal or technical argument that would properly shift the burden to Appellants to prove a negative. Instead, the burden is and always was on the Examiner to provide a *prima facie* case of obviousness. As that burden has not been met, the rejection is invalid.

Further, the Examiner's question regarding whether Co(110) is a "newly discovered material" is irrelevant. Nowhere in the law does it state that only newly discovered materials are patentable. The analysis of obviousness is performed in view of the claimed combination of elements. The fact that an element in the abstract may have been known is not relevant unless the Examiner can provide evidence to suggest that it would have been obvious to a person having ordinary skill in the art to have used

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the known material in the combination as claimed. The Examiner has not remotely met this burden, but instead has by *fiat* declared that he "considers" the prior art material to have the claimed characteristics. The basis of the rejection is contrary to law and must be withdrawn.

Regarding the Examiner's arguments with respect to claim 60, the Examiner asserts that his reliance upon "official notice" as to the notoriety of an amorphous underlayer supports the rejection of that claim. Appellants hereby traverse the Examiner's conclusion of notoriety, however, the Examiner failed to address the substantive arguments presented in the Appeal Brief. Specifically, even if the use of an amorphous underlayer in the abstract is notorious as suggested by the Examiner, the mere knowledge of an element in the prior art does not remotely support a conclusion of obviousness.

The question is whether a person having ordinary skill in the art would have been motivated to use the recited material in combination as claimed. The Examiner's "rationale" at page 5 of the final Office Action that the use of the amorphous underlayer would be obvious "so as to provide a magnetic read head able to read a high density on a magnetic recording medium" is entirely unsupported by the prior art. The Examiner has simply made up a motivation to combine in order to meet the claim limitations. The act of crafting a motivation to combine to meet the claim limitations can be seen as nothing more than hindsight. The Examiner has failed to take Official Notice that the use of the recited layer would provide the suggested motivation to combine, and therefore, the stated motivation is simply an unsupported statement. As such, the rejection must fail.

Finally, with respect to the argument provided as to claim 62 at page 12 of the Examiner's Answer, the Examiner has again misapplied the law in asserting that Appellants must provide evidence to preclude the prior art from having a recited characteristic. To suggest that Appellants have the burden to prove a negative, *i.e.*, that a prior art material cannot have a claimed characteristic, completely misinterprets the applicable law. Neither § 102 nor § 103 requires Appellants to prove that the prior art does not teach something. Instead, the burden is upon the Examiner to show what the prior art does teach. The closest legal doctrine to that proposed by the Examiner is the doctrine of inherency, wherein an unstated characteristic that *necessarily* follows from the teachings of the prior art can be cited by the Examiner as a teaching of the cited reference. The Examiner, however, has provided absolutely no evidence that the cited material in the prior art inherently possesses the claimed characteristic and Because the Examiner has failed to provide evidence that the prior art material *necessarily* possesses the claimed characteristic, Appellants respectfully assert that such an inherency argument would necessarily fail.

In view of the above Appellants request that the rejection be reversed.

### Conclusion

Appellants respectfully request the review and reconsideration of the pending rejections of the claims. Based on even the broadest *reasonable* interpretation of the claims, Appellants assert that the claims are fully in compliance with the requirements of 35 U.S.C. § 112. With respect to the prior art rejections of the claims, the pending

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rejections are mere hindsight in view of Appellants' claimed invention. The references fail remotely to teach or suggest the claimed combination. Further, the references themselves are not analogous prior art.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: December 1, 2000

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